

**A REVISION OF THE *EUPREPES* SPECIES GROUP OF
COSMIOCRYPTUS (HYMENOPTERA: ICHNEUMONIDAE)**

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Abstract.—*Cosmiocryptus* of the *euprepes* group are red, black, and white ischnines with the ovipositor compressed, vertical ridges on the ovipositor tip, and the female front tibia inflated. *Cosmiocryptus euprepes* (Porter), new combination, inhabits gallery forests near Buenos Aires, Argentina. *Cosmiocryptus eugrammus*, new species, frequents the northwest Argentine Subandean Desert. It differs from *euprepes* in having the mesoscutum uniformly black, the mesosoma without red markings, the first flagellomere more slender, and the propodeal cristae weakly subrescenscent or subcuneate.

The species here discussed belong to the subtribe Ischnina of the geline tribe Mesostenini (as defined by Townes, 1969).

Cameron (1902) proposed *Cosmiocryptus* for a single new species (*C. violaceipennis*) from the Peruvian Coastal Desert. Recent workers (Porter, 1967; Townes, 1969) have viewed *Cosmiocryptus* as a synonym of *Trachysphyrus* Haliday (1836). Subsequent accumulation of more than 100 undescribed species in *Trachysphyrus* (s.l.) has revealed enough diversity to justify recognition of several new genera and resurrection of *Cosmiocryptus* from synonymy.

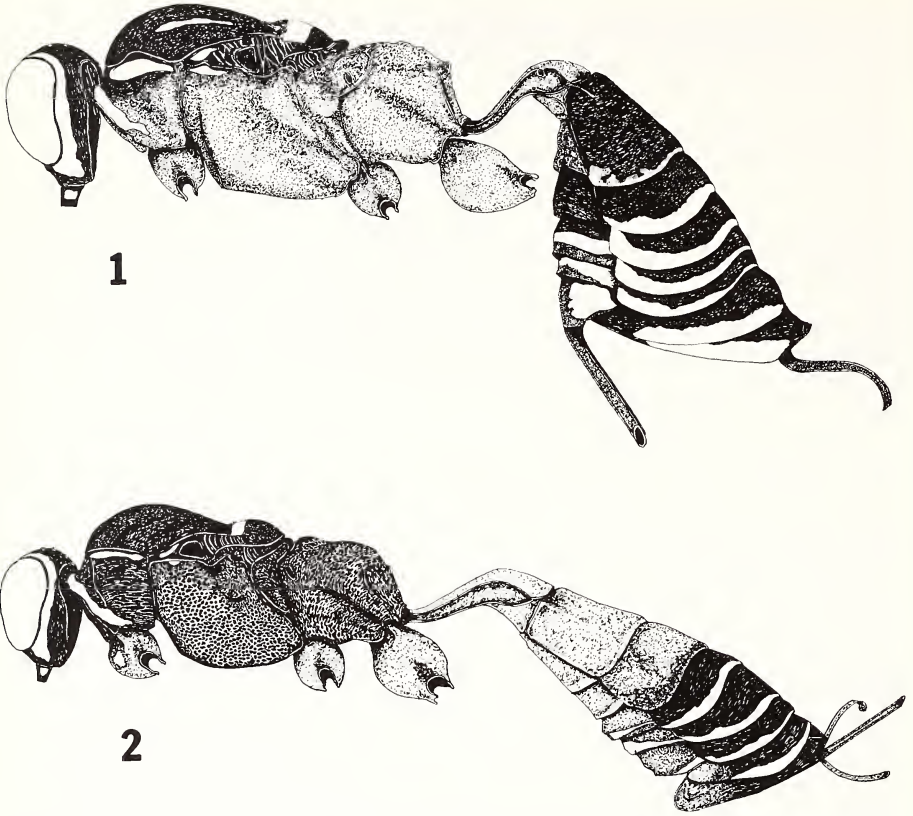
Cosmiocryptus now is regarded (Porter, 1985b) as a large South American genus related both to *Trachysphyrus* and to *Chromocryptus* Fitch. From these, it differs because the axillula vein runs close to the anal margin of the hind wing, the base of the first gastric tergite has no strong lateral expansions, the mediella is often moderately arched rather than straight, and the second gastric tergite never is both coarsely and densely punctate (diagnosis polythetic).

Both *Trachysphyrus* and *Cosmiocryptus* remain heterogeneous and probably paraphyletic taxa. *Chromocryptus* (Porter, 1985a) is regarded as a monophyletic unit that includes only the North American *C. planosae* (Fitch) and several very similar species from the southern United States, Mexico, and South America.

One of the most apomorphic *Cosmiocryptus* is *Trachysphyrus euprepes* Porter (1967), which inhabits subtropical gallery forest near Buenos Aires, Argentina. In this species the ovipositor is compressed and the female front tibia inflated, features which suggest parasitism of lepidopterous larvae that bore in stems or twigs. A specifically distinct but similarly modified *Cosmiocryptus* has now been discovered among Malaise trap samples from the northwest Argentine Subandean Desert. Here-with, I describe the new taxon, give additional locality data for *C. euprepes*, and furnish a revised diagnosis of the *euprepes* species group.

DIAGNOSIS OF THE *EUPREPES* SPECIES GROUP

Flagellum not flattened below toward apex, its first segment 5.9-7.3 as long as deep at apex; clypeus bluntly subpyramidal in profile, its apical margin slightly convex



Figs. 1, 2. 1. *Cosmiocryptus euprepes*, female. Body in lateral view, showing habitus and color pattern. 2. *Cosmiocryptus eugrammus*, female. Holotype. Body in lateral view, showing habitus and color pattern.

and without teeth or tubercles; malar space 0.8–0.9 as long as basal width of mandible; front tibia in female stout and inflated; pronotum with dorsal margin a little inflated and the submarginal groove indistinct; epomia strong in pronotal scrobe, not prolonged or modified; mesoscutum with the well defined notauli reaching 0.3–0.6 its length and with its surface densely punctate, mat to extensively shining; mesopleuron finely but often rather strongly reticulately wrinkled; wing with areolet moderately large, a little high and narrow, its intercubiti strongly convergent above, and with second abscissa of radius 0.5 as long as first intercubitus, as well as with the second recurrent a little reclivous and slightly outcurved on upper 0.5, disco-cubitus weakly angled, ramellus present or absent, mediella gently arched, axillus close to anal margin of hind wing; propodeum short and high to moderately elongate, its apical face discrete and abruptly declivous, its cristae weakly subcuneate to broad and strongly subligulate, its surface largely with strong reticulate wrinkling; first gastric tergite with a low and flange-like lateral expansion at base of petiole, postpetiole 1.1–1.5 as wide apically as long from spiracle to apex, ventro-lateral carina sharp throughout, dorso-

lateral carina traceable throughout and strongest on postpetiole, dorsal carinae detectable and best developed on postpetiole, and with strongly granular micro-reticulation on the mat postpetiolar surface; second gastric tergite dully shining or mat with abundant, well separated to semiconfluent (but largely discrete), shallow, small to medium sized punctures which emit short setae that mostly approach, equal, or exceed the length of their interspaces; ovipositor with sheathed portion 0.6–0.8 as long as fore wing, straight, strongly compressed, with very low nodus and tiny nodal notch, with dorsal valve on tip showing a gently convex taper between notch and apex, and with ventral valve on tip vertically cut by fine and well spaced ridges.

KEY TO SPECIES OF THE *EUPREPES* GROUP

1. Propodeum and thoracic pleura extensively red; mesoscutum with a pair of white discal stripes along notauli; hind tarsus partly white; first flagellomere 5.9 as long as deep at apex; mesoscutum extensively shining; propodeal cristae strong and broadly subligulate; second gastric tergite with well separated punctures *C. euprepes* (Porter)
- No red on mesosoma; no white along notauli or on hind tarsus; first flagellomere 6.9–7.3 as long as deep at apex; mesoscutum mat; cristae weakly subcuneate; second gastric tergite punctures adjacent to subconfluent *C. eugrammus*, n. sp.

Cosmiocryptus euprepes (Porter), **New Combination**

Fig. 1

Trachysphyrus euprepes Porter, 1967:101. Type locality, Punta Lara in Buenos Aires Province, Argentina. Holotype female, American Entomological Institute.

New material examined. Argentina (La Balandra in Buenos Aires Province, 27.XI.1968, C. Porter), 2 females, in C. Porter Collection.

Habitat notes. My specimens were swept from herbaceous undergrowth in subtropical gallery forest along the Río de la Plata near La Plata city.

***Cosmiocryptus eugrammus*, new species**

Fig. 2

Description. Female. Antenna black with pale brown on scape below and with white above from apex of fifth through base of ninth flagellomere; head and mesosoma black with the following white: spot on first maxillary palpomere; large blotch on base of mandible; large blotch on clypeus; orbital ring which is interrupted at bottom of eye anteriorly but which postero-ventrally reaches far into malar space; band on most of front pronotal margin, except toward lower corner and except for a dusky area on meson of collar; narrow band on dorso-lateral margin of pronotum; most of tegula; tiny spot on subalarum; and anterior 0.4 of scutellum; first and second gastric tergites pale red with slight dusky staining; third tergite pale red with black on apical 0.4 and with apical rim narrowly brownish; fourth tergite black with a very broad white apical band; fifth to seventh tergites black with broad but dorsally narrowed or even briefly interrupted white apical bands; and eighth tergite black (becoming brownish ventrad) with white on dorso-lateral 0.5 of apical margin and also very narrowly on dorsal apex; legs pale red (tibiae and tarsi duller), front coxa extensively blackish with a dorso-anterior white blotch basad, mid coxa sometimes black toward

base, front and mid trochanters blackish above, apex of hind tibia slightly dusky, hind tarsomeres dusky; and wings hyaline. Length of fore wing 6.0–6.6 mm.

Clypeus rather high and bluntly to a little sharply asymmetrically pyramidal in profile, its apical margin a little convex. Malar space 0.85–0.92 as long as basal width of mandible. Temple 0.5 as long as eye in dorsal view.

Front tibia stout and inflated. Mesoscutum with notauli narrow and well defined for 0.3–0.5 its length, its surface mostly mat with small, subadjacent to adjacent or reticulately confluent punctures that grade meso-apical into strong but fine reticulate wrinkling. Mesopleuron with speculum largely reticulo-punctate and with surface otherwise finely but strongly reticulo-rugose. Ramellus present.

Propodeum a little elongate, its basal face gently sloping apical, its well differentiated apical face steeply declivous and only 0.6–0.7 as long as basal face, the cristae broadly subcuneate but inconspicuous. Postpetiole 1.1–1.5 as wide apically as long from spiracle to apex, its surface mat with strongly granular micro-reticulation. Second gastric tergite mat with granular puncto-reticulation, its rather small and shallow punctures mostly adjacent to semiconfluent and emitting short setae which in general slightly exceed the length of their interspaces. Ovipositor with sheathed portion 0.6–0.7 as long as fore wing; straight, rather slender, strongly compressed; dorsal valve with a gradual, slightly convex taper between notch and apex; ventral valve on tip with well spaced, sharp, nearly vertical ridges.

Male. Unknown.

Holotype. ♀, Argentina (Yacochuya near Cafayate in Salta Province, 1,950 m, 1–15.III.1969, in Malaise trap, L. Stange, A. Terán and A. Willink), in collection of the Fundación e Instituto Miguel Lillo.

Paratypes. 3♀♀, same locality and collection data as holotype, 1–15.III.1969, 16–31.III.1969, 16–31.XII.1969. Deposited in Florida State Collection of Arthropods, American Entomological Institute and C. Porter Collection.

Relationships. This species closely resembles *Cosmiocryptus euprepes* (Porter) in its swollen female front tibia and compressed ovipositor with weak nodus and nearly vertical ridges on the ventral valve near apex. It may be distinguished from *C. euprepes* by the following combination of characters: no red on mesosoma, no white stripe along notaulus, first and second gastric tergites without white apical bands, third tergite red basally, no white on hind tarsus, first flagellomere 6.9–7.3 as long as deep apically, notaulus only 0.3–0.5 the length of mesoscutum, mesoscutal surface largely mat with adjacent to reticulately confluent punctures, speculum mostly puncto-reticulate, ramellus developed, propodeal cristae weak and subcrescentic or subcuneate, apical face of propodeum definitely shorter than basal face, postpetiolar granulation stronger, and second gastric tergite with adjacent to subconfluent punctures.

Habitat notes. Like so many other *Cosmiocryptus*, *C. euprepes* has been taken only by Malaise trap. The type locality is a permanently watered ravine located near 2,000 m in an ecotone between the Subandean and Prepuna Biomes, as well as containing some relict biota of Chaco or wet forest affinities (Porter, 1975). Two Malaise traps were left at this site, one “across an irrigation ditch beneath a *Prosopis nigra* . . . with *Salix*, *Trichocereus*, *Cestrum*, and *Nicotiana* in the vicinity” and the other “at the foot of a rocky slope with *Trichocereus*, *Bulnesia*, *Prosopis*, *Caesalpinia*, and other desert growth” (Stange, Terán, and Willink, 1976:89–90).

Specific name. *Eugrammus* is the latinized masculine singular of the Greek adjective *eugrammos*, "well drawn, with elegant lines."

COLLECTIONS

American Entomological Institute. 3005 SW 56th Avenue, Gainesville, Florida 32608, USA.

Florida State Collection of Arthropods. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Doyle Conner Building, P.O. Box 1269, Gainesville, Florida 32602, USA.

Fundación e Instituto Miguel Lillo. Facultad de Ciencias Naturales, Universidad Nacional de Tucumán, Miguel Lillo 205, 4000 S. M. de Tucumán, R. Argentina.

Porter Collection. The Collection of Charles C. Porter currently is housed with the Florida State Collection of Arthropods.

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